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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/642,996 | 08/18/2003 | Michael J. Hubbard | 0-005120USBFC | 3496 |
| 7590 04/20/2004 | | | EXAMINER | |
| Chief Intellectual Property Counsel OMNOVA Solutions Inc. 175 Ghent Road Fairlawn, OH 44333-3300 | | | PURVIS, SUE A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1734 | |

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/642,996

Applicant(s)

HUBBARD ET AL.

Examiner

Sue A. Purvis

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>04 Nov 2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 19-22, 24, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Hubbard et al. (US Patent No. 6,253,528 B1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Hubbard discloses an apparatus for extruding a thermoplastic elastomer (TPE) to join at least two membranes of EPDM to form a roofing membrane. (See Abstract.)

Regarding claim 20, one embodiment includes a heated screw (42) which melts the TPE so it can bond the sheets together.

Regarding claim 21, press wheel (50) presses the TPE and EPDM together.

Regarding claim 22, Hubbard includes a heated screw (42) and press wheel (50).

Art Unit: 1734

Regarding claim 24, the TPE strip is extruded such that it is bonded to the top surface of one panel and the bottom surface of the other panel. (See Figure 2.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19-24, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valaitis et al. (US Patent No. 5,260,111) in view of Iwamoto (JP 60-203640 A) and Davis (US Patent No. 5,888,602).

Valaitis discloses a method of making a roofing membrane where two EPDM sheets are joined with a thermoplastic film.

Valaitis does not teach using a thermoplastic elastomer to bond the roofing membrane together.

Iwamoto discloses bonding the roofing material together with a thermoplastic elastomer sheet or tape.

Iwamoto does not disclose extruding the thermoplastic elastomer sheet.

Davis discloses bonding EPDM panels together using an elastomeric polymer-based adhesive tape composition which is particularly adaptable for use as an adhesive tape for joining together roof sheeting materials. Davis also teaches that in the case of the seaming tape adhesive compositions it can be necessary to blend and extrude the composition on-site and immediately thereafter apply the extruded adhesive tape composition to the roofing membranes which are to be joined together in order to prevent premature curing which can

Art Unit: 1734

adversely affect the adhesive properties of such compositions. Alternatively, the adhesive tape composition of the present invention may be fabricated in the form of an extruded tape, wound in a roll on a release paper liner.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that an alternative to using the thermoplastic film in Valaitis is to use a thermoplastic elastomer sheet as disclosed in Iwamoto, because Iwamoto discloses that using a thermoplastic elastomer to bond roofing sheets together is known in the art. Furthermore, as taught by Davis, it is known to extrude the material either immediately before the bonding or extrude the material earlier and store it in a roll form.

Regarding claims 20 through 22, Valaitis, Iwamoto, and Davis teach bonding by means of heat and pressure.

Regarding claim 23, Iwamoto includes an embodiment where the material is bonded to the top surfaces of the panels.

Regarding claim 24, Valaitis, Iwamoto, and Davis include embodiments where the strip is bonded to the top of one panel and to the bottom of the second panel.

Regarding claim 26, Valaitis suggest the sheet material can be cut to a desired width. A width of at least 4 feet wide is within the purview of one having ordinary skill in the art. (Col. 7, lines 16-29.)

Regarding claim 28, Valaitis discloses the sheet being at least 0.045 inches thick. (Col. 9, lines 18-23.)

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being obvious over Hubbard as applied to claim 19 above, further in view of Iwamoto et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a

Art Unit: 1734

showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Hubbard only discloses the adhesive going between the two panels, thus the TPE is on the top surface of one panel and on the bottom surface of the other panel.

Iwamoto discloses bonding of water proofing sheets. In one embodiment, the TPE material is located between the two sheets. (See Figure 3.) In another embodiment, the TPE material is on the top surfaces of both the panels. (See Figure 1.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made based on the teachings of Iwamoto that a functionally equivalent alternative expedient of having the TPE between the panels is to have the TPE on the top surfaces of both the panels. Both methods of bonding the sheets together are within the purview of the artisan as shown by Iwamoto.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being obvious over Hubbard as applied to claim 19 above, further in view of Karrfalt (US Patent No. 5,843,552).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Hubbard only discloses the adhesive going between the two panels, thus the TPE is on the top surface of one panel and on the bottom surface of the other panel.

Karrfalt discloses an embodiment where the sealant tape (10) goes between the abutting EPDM membrane substrates (24, 26). (See Figure 2; Col. 3, lines 47-67.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to abut the membranes and allow the sealing material to be placed there between in Hubbard, because Karrfalt discloses that having the adhesive between the panels is known to one having ordinary skill in the art.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being obvious over Valaitis et al. in view of Iwamoto and Davis as applied to claim 19 above, further in view of Karrfalt.

Art Unit: 1734

Valaitis et al. in view of Iwamoto and Davis the TPE is on the top surface of one panel and on the bottom surface of the other panel or on the top surfaces of both the panels, not between the adjoining edges.

Karrfalt discloses an embodiment where the sealant tape (10) goes between the abutting EPDM membrane substrates (24, 26). (See Figure 2; Col. 3, lines 47-67.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to abut the membranes and allow the sealing material to be placed there between in Valaitis et al. in view of Iwamoto and Davis, because Karrfalt discloses that having the adhesive between the panels is known to one having ordinary skill in the art.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being obvious over Hubbard as applied to claim 19 above.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the

Art Unit: 1734

time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Hubbard discloses that the roofing membranes may be of any suitable length and width as desired subject to manufacturing and performance considerations. (Col. 2, lines 55-60.) Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have panels of at least 4 feet wide.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being obvious over Hubbard as applied to claim 19 above, further in view of Hollis (US Patent No. 4,343,667).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Hubbard does not disclose the thickness of the panels.

Hollis discloses that standard thickness is between 1/16 inch and 3/32 inch.

Art Unit: 1734

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a panel thickness of at least 0.04 inches, because that is less than the standard thickness discloses in Hollis.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is (571) 272-1236. The examiner can normally be reached on Monday through Friday 9am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sue A. Purvis
Examiner
Art Unit 1734